

PATENT ABSTRACTS OF JAPAN

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(71)Applicant : NEC CORP

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(54) OPTICALLY COUPLED SEMICONDUCTOR DEVICE

(57)Abstract:

PURPOSE: To obtain a high transmission efficiency and a high capability of removing the same phase without any alteration of conventional manufacturing technique by a construction wherein a lead frame whereon a light-receiving element is mounted is set at the electrically lowest potential in a circuit on the light-receiving element side, the shape of the lead frame is so changed as to interrupt a light-emitting element from the light-receiving element, and further the two elements are sealed in the same transparent resin.

CONSTITUTION: A light-emitting element 1 is mounted on a terminal 7 and a light-receiving element 2 on a terminal 8. The two elements are covered with transparent resin 4 and further with white-opaque resin 5, so as to increase the rate of arrival of light at the light-receiving element. Furthermore the two elements are sealed up finally by light-intercepting resin 6. The end of the terminal 8 is so formed as to interrupt the light-emitting element from the light-receiving element.

A light outputted from the light-emitting element passes with diffused reflection through an optical path formed of the resin and reaches the light-receiving element in a track shown by a dotted line in the figure.

